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Patent Claims

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1. A vertical bag forming, filling and sealing machine comprising a feed system for a wrapping material forming the flexible tube bags around which the wrapping material is fed for the formation of a flexible tube and which serves for the filling of the material which is to be packed, wrapping material drive means, a longitudinal seam welding device, a cross seam welding device for the formation of a cross weld seam at a tube bag, a lifting device for the filled tube bag which is not yet provided with an upper cross weld seam, and a folding device with two folding members for the wrapping material provided below the cross seam welding device, wherein the lifting device and the folding device are driven in such a controlled manner that, for folding the wrapping material onto the surface of the filling material, the filled tube bag is lifted relative to the folding device and the two folding members of the folding device are moved horizontally inwardly, characterized in

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that the tube bag forming, filling and sealing device is designed as machine with continuously moving flexible tube and includes a device for lowering the cross seam welding device (5), folding device (6) and lifting device (9) synchronously with said downward movement of the flexible tube, and in that the inward movement of the weld jaws (7) of the cross seam welding device (5) and the folding members of the folding device (6) is controlled up to the respective end point in such a manner that at the upper weld jaw contact point with the wrapping material (1) nearly no relative movement between the weld jaws (7) and the wrapping material (1) takes place whereafter the cross seam welding device (5) is lowered synchronously with the downward movement of the tube bag.

2. The bag forming, filling and sealing machine according to claim 1, characterized in that the cross seam welding device (5) produces an upper and a lower weld seam.
3. The bag forming, filling and sealing machine according to claim 1, characterized in that the cross seam welding device includes a welding device for the generation of an upper cross weld seam and a welding device for the generation of a lower cross weld seam.
4. The bag forming, filling and sealing machine according to one of the preceding claims,

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characterized in that the folding device (6) is fixed at the cross seam welding device (5).

5. The bag forming, filling and sealing machine
5 according to one of the claims 1 to 3,
characterized in that the folding device is formed
by the cross seam welding device.
- 10 6. The bag forming, filling and sealing machine
according to claims 3 and 5, characterized in that
the folding device (6) is formed by the welding
device for the generation of the upper cross weld
seam.
- 15 7. The bag forming, filling and sealing machine
according to one of the preceding claims,
characterized in that it includes a single lowering
device for the cross seam welding device (5),
folding device (6) and lifting device (9).
- 20 8. The bag forming, filling and sealing machine
according to one of the claims 1 to 6,
characterized in that the lowering device includes
separate means for lowering the cross seam welding
25 device and the folding device on the one side and
of the lifting device on the other side.
- 30 9. The bag forming, filling and sealing machine
according to one of the preceding claims,
characterized in that the lowering device is formed
as slide unit (11) movable along a vertical rail

(12) and supporting the cross seam welding device (5), folding device (6) and lifting device (9).

5 10. The bag forming, filling and sealing machine according to claim 9, characterized in that the lifting device (9) includes a slide unit (13) movable along a vertical rail (15) and that the rail (15) is disposed at the lowering device.

10 11. The bag forming, filling and sealing machine according to one of the preceding claims, characterized in that the lifting device (9) has two container halves which are open on the upper side or flaps (18) supported at a cross beam (14) so that they can be pivoted into an open and closed condition, wherein the cross beam (14) is supported by the slide unit (13) of the lifting device (9).

15 20 12. The bag forming, filling and sealing machine according to one of the preceding claims, characterized in that it includes side folders (8).

25 13. The bag forming, filling and sealing machine according to one of the preceding claims, characterized in that the folding device (6) is disposed in a height adjustable manner.